MYRMECIA

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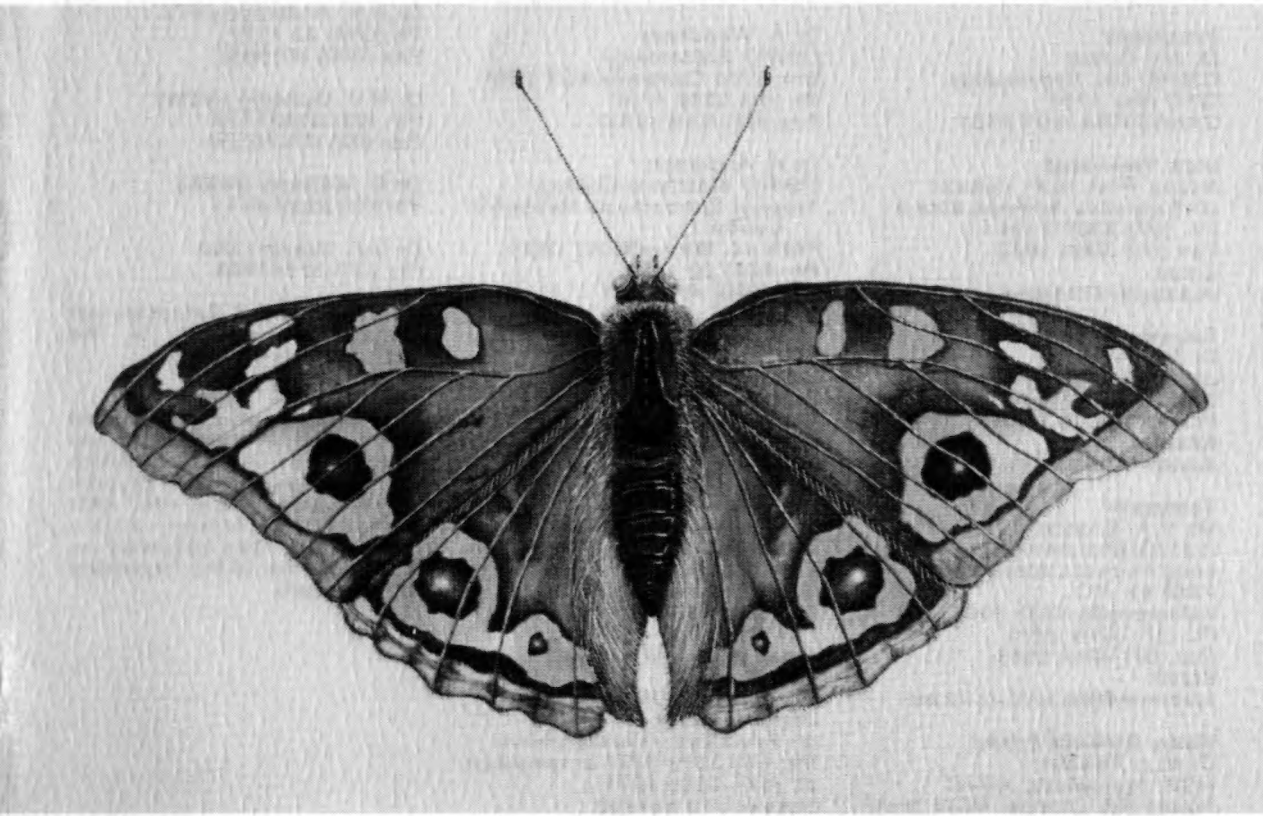

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THE COVER

The cover depicts *Junonia villida calybe*, the meadow argus butterfly. The illustration, which won third prize in the Student Colour section of the 1997 AES Scientific Illustration Competition, was prepared by **Justin Slevin** of the University of Newcastle.

MYRMECIA

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INSERTS - PLEASE NOTE: Inserts are no longer handled by the Editor. If you wish to include an insert in *Myrmecia* please contact Shirley Green of Blackwell Science (Asia). Contact details are on the back cover of this issue.

NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society. Items printed herein should not be reproduced without permission of the author of the material.

COPY DEADLINE FOR NEXT ISSUE

Material for publication in the February 1999 issue of *Myrmecia* should be in the hands of the Editor at the address below by **Friday 22 January 1999**. Submission to murray.fletcher@agric.nsw.gov.au is preferred but submission on IBM-compatible floppy disk in a major word processing format, or by fax, letter or carrier pigeon to the address below is acceptable.

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EXECUTIVE REPORT

(none received)

Phil Carne Prize 1998

Following a change in procedure at the AGM in Melbourne in 1997, all students that had published or submitted a paper to the *Australian Journal of Entomology* were automatically considered as "nominated" for the Phil Carne Prize for the current year.

In subsequent years we will only consider submitted papers. This year 17 papers were considered, making it a tough call for our judges. Five students were short listed and the prize was awarded to **Martin Steinbauer** for the paper "Seasonal fluctuations in body weight, lipid content

and the starvation longevity of *Amorbus obscuricornis* (Westwood) and *Gelonus tasmanicus* (Le Guillou) (Hemiptera: Coreidae)." Other candidates deserve honourable mentions, these were: **Ahmad Dahlan, Manthana Milne, Graham Floater** and **Weerawan Amornsak.** All those considered deserve congratulations for the standard of their work. We hope judging will be as difficult next year.

Myron ZALUCKI
Vice President

PROFILE
Dr Jim Cullen New AES President

Jim Cullen, new AES President

Jim Cullen has a BA from Cambridge and a PhD from Adelaide. He joined CSIRO Entomology in 1970 and has worked primarily in biological control, principally of weeds. He was OIC of CSIRO's Montpellier laboratory from 1983-87, program leader for biological control of weeds 1988-95, Assistant Chief 1990-95, Deputy Chief 1995-97 and Chief of the Division from 1997.

He has been a member of several national and international government working groups and committees concerned with agriculture, biological control, weeds and quarantine issues. He is currently a member of the Australian Weeds Committee, is on the Board of the CRC for Weed Management Systems and is a member of the Quarantine and Exports Advisory Council.

Jim's early entomological interests were in UK Lepidoptera and freshwater ecology, and invertebrate biology and ecology became the main focus of his undergraduate studies. Following graduation and an expedition to southern Libya, where he collected for the BM while studying dragonfly populations in an oasis system, he migrated to Australia to pursue a PhD at the Waite Institute under **Tom Browning** during the density dependence/independence debate of the 60s.

His PhD studies on the ecology of *Helicoverpa punctigera* were followed by a postdoc on the introduction of *Aphytis melinus* for the biological control of red scale on citrus in South Australia. His research interests have been principally in population dynamics and he has been a strong advocate of building a more scientific and quantitative basis for biological control. Whether surveying for potential agents in Europe, devising complex host-specificity experiments or conducting population studies on targets and agents pre and post release, Jim has led programs on skeleton weed, ragwort, heliotrope, St John's wort, nodding thistle and sitona weevil. An early member of the Australian Entomological Society and a life-long believer in the importance of entomology, he has always been keen to see the Society foster the development of entomologists and entomological science in Australia.

Australian Entomological Society Inc 29th Annual General Meeting

Annual report of the Executive was presented by **Myron Zalucki**

Report of Chief Editor

Volume 37, published in 1998, has seen the greatest set of changes to the Journal in the history of the Society.

We have appointed a fresh, expanded Editorial

Board whose members have a wide spread of interests, location and institutions. For the first time members from outside Australia have been appointed.

The Society has moved the publication, distribution and marketing of the Journal to Blackwell Science Asia. The changes to format and appearance are obvious and have been received by the membership positively. Less obvious are changes in production (electronic versions of all final manuscripts are now required), distribution and marketing. An increase in the present outside subscriber base (166 subscribers in 26 countries) is being targeted by Blackwells. In line with changing technology, the contents page is now available on the worldwide web and copies of papers can be ordered electronically.

These changes come without loss to the Society of overall control of the Journal, particularly of editorial control. The submission, vigorous refereeing and acceptance of manuscripts remain as before.

Production statistics for Volume 36 of the *Australian Journal of Entomology* for the year 1997 were:

Part	Published	Pages	Papers	Reviews
1	28 February	100	14	4
2	30 May	96	15	0
3	29 August	112	18	5
4	1 December	96	12	3

The total number of pages (404) was one of the largest published. Publication schedules were maintained with three parts published in the months specified in the Constitution and the fourth only 1 day late.

Production statistics for Volume 37 (1998) are:

Part	Published	Pages	Papers	Reviews
1	3 April	96	19	0
2	3 July	96	18	2

Production fell behind schedule during the changeover to Blackwells, but will improve with parts 3 and 4.

During 1997, the flow of manuscripts (with 1996 in parentheses) was:

Manuscripts received	76 (69)
accepted	57 (66)
rejected/withdrawn/lapsed	12 (7)
with Technical Editors	56 (49)

The number of manuscripts received during the year was up on that received in 1996 and reversed the downward trend of the few years before 1995. About 50 manuscripts have been received so far during 1998. Acceptances were relatively constant through 1997, with enough material at the end of the year to fill more than the first issue of 1998.

Alan Andersen, Alan Bishop, Ken Walker and **Tony Wapshere** have continued to give excellent service to the Society as Technical Editors. The editorial assistance of **Jenny Allsopp** and the input of **Mandy Naylor** and the production team at Blackwells have been vital in the smooth running of the Journal and in meeting production schedules. I thank them all.

The Executive aims to see the *Australian Journal of Entomology* as THE place to publish Australasian entomological research both nationally and internationally and for it to be recognised as one of the big entomological titles worldwide. The changes that we have implemented are directed towards this aim. However, a journal can only be as strong as the quality of the manuscripts submitted. I encourage the submission of many more high quality research and review manuscripts from members in the future.

Peter ALLSOPP
Chief Editor

News Bulletin Editor's Report

Myrmecia, the Society's News Bulletin, continues to play a pivotal role in the Society's operations as an avenue of communication for members. Unfortunately, the move to Blackwells has not been without difficulties. The revamping of the Journal to its current impressive format provided an opportunity to reorganise distribution of both the Journal and *Myrmecia*, which are now sent to members in the same mailing. Although this makes a significant saving in postage, it does require that both publications are ready to go to members at the same time. So far, it has been *Myrmecia* that has suffered with all issues in 1998 being late, particularly the February issue which was almost three months late. As a means of communication, with the core role of keeping members informed of entomological activities in Australia, this unpredictable delivery has meant that *Myrmecia* in 1998 has failed in its primary role. Many deadlines advertised in each issue of the bulletin have been well gone before members have received their copy. Blackwells, at my request, mailed the May issue of *Myrmecia* separately from the Journal to ensure members received notice of a number of approaching

activities before it was too late to participate and I acknowledge this gesture of cooperation. It is unfortunate that some prominent members of the entomological community took the view that it was somehow the fault of the Editor that their copy of the News Bulletin hadn't arrived when expected.

I am pleased to be able to say that this situation should not continue. Blackwells recognise the need for the Journal to be distributed at preset times each year and this will allow *Myrmecia* to be distributed on time as well. In the meantime, I ask members to continue to be patient and understanding.

The high quality and readability of the content of *Myrmecia* is again a reflection of the contribution to the bulletin made by the Society's regional councillors. I have always enjoyed the variety of styles and attitudes exhibited by the different contributors and I am sure members who read all the Regional News also enjoy this section.

I would like to acknowledge the important contribution made to *Myrmecia* by **Jeff Thornberry** of G.K. Craig Printers. Jeff has proved to be most reliable and conscientious and this has made the preparation of each issue much easier. **John Macdonald** has continued to support *Myrmecia* as Assistant News Bulletin editor, taking on the mailing of each issue to those "News Bulletin only" members who receive *Myrmecia* but not the Journal. I also acknowledge NSW Agriculture who accept that the time I spend preparing *Myrmecia* is part of my contribution to my profession, although *Myrmecia* doesn't count as a publication for progression purposes.

After seven years as Editor of *Myrmecia* I am now looking to pass the reigns on to a younger member of the profession who could perhaps bring new ideas and a rash of new enthusiasm to its production. *Myrmecia* provides links to every part of the Australian entomological community and a high profile for its Editor is concomitant with the position. I have found *Myrmecia* to be an excellent way of staying in touch, important at Rydalmere and even more so in Orange. I feel that there are many entomologists in Australia who are not only capable of maintaining *Myrmecia* at a high standard but would gain considerably from their involvement with the publication. I have agreed to stay on until the next AGM in 1999, but would like to step down at that time.

Murray FLETCHER
News Bulletin Editor

Report of the Conservation Committee 1996-1997

The Conservation Committee once again comprised 10 members, namely **Tim New, Robin Coy** and **Paul Horne** (Victoria), **Eric Matthews** (South Australia), **Alan Andersen** and **Peter Dostine** (Northern Territory), **Genevieve Carruthers** (Australian Capital Territory), **Robin Gunning** and **Geoff Williams** (New South Wales), plus **Jonathan Majer** (Western Australia). In addition, the President and Secretary are *ex-officio* members of the Conservation Committee.

Although few activities have been carried out under the specific banner of the Conservation Committee, members have been active in their own right on insect and related arthropod conservation matters.

Eric Matthews reports that a newly-formed Butterfly Conservation Group has been formed in SA, consisting of eight people - two botanists, five lepidopterists, including **Bob Fisher** of the SA Museum and the secretary **Jan Forrest**, Collection Manager at SAM. The aim of the group is to conserve butterflies and, where appropriate, moths in SA by promoting community and government interest and research in preserving butterfly habitats and by reintroduction of butterflies into habitats in which they previously existed.

He also reports that the Bookmark Biosphere Trust is aiming to extend the population of an endangered *Ogyris* butterfly which is known from only one disturbed site near Waikerie in the Riverland.It is associated with the widespread ant *Camponotus terebrans* and **Archie McArthur** of SAM has been providing identification of the ants involved.

On 23 February there was a meeting to discuss biological control of weeds, addressed by six people including **Archie McArthur** who discussed the probable reasons why ants are frequently preventing the successful establishment of control agents. The immediate case in point is the attempted control of boneseed by the introduced South African chrysomelid *Chrysolina oberpraeleri*. In spite of the expenditure of large sums of money on this project, every attempt to establish the beetle has been frustrated by ant predation. Archie suggested that a study of ant behaviour would identify the times of the year when the relevant ants are not raising brood in the nest and consequently do not need protein food. The beetles are more likely to survive during these

times.

The Nature Conservation Society of SA, chaired by Prof. **Hugh Possingham**, in conjunction with the SA Farmers' Federation and the Department of Environment, Heritage and Aboriginal Affairs, is conducting three field days in the South East in which **Archie McArthur** is involved. These field days are designed to impress land managers of the need for conserving remnant vegetation, particularly through the control of weeds. On the first field day on 23 August near Bordertown, Archie addressed a group of 62 people, mostly farmers, on the importance of ants as environmental indicators.

A *Mesostoa* project is being undertaken by **Andy Austin** and **Paul Dangerfield** of the University of Adelaide. The genus *Mesostoa* (Hymenoptera: Braconidae), although little known, is probably one of the most significant insects in SA from a conservation perspective. Phylogenetically, the subfamily is very remote from other groups of braconid wasps and has a highly aberrant biology in that it is a primary gall former on *Banksia marginata*. It is endemic to Australia and, although species have been collected from other parts of the continent, the only viable populations now known to exist occur in SA. The two species from this State are very rare or localised, with the possibility that one of them is already extinct. The few known populations of the second species are in the Adelaide Hills and near Kingston. *Mesostoa* is particularly vulnerable to habitat fragmentation and bushfires because of its restricted distribution, its annual life cycle which is contained within galls, its very poor dispersal capabilities (males do not have functional wings and females rarely fly) and the probability that females oviposit into the tree from which they emerge. Gall-forming insects may be an excellent group for conservation-based studies because of their longer life cycles and identifiable physical presence on trees. *Mesostoa* could be used as a "flagship" taxon for invertebrate conservation in SA.

In NSW, **Geoff Williams** has been involved in a number of activities which have direct or indirect implications for invertebrate conservation. He has just completed a survey of coastal weeds invading littoral rainforests and other maritime communities for the Greater Taree City Council (Coastline Survey of Asparagaceae and Other Environmental Weeds in the Manning Valley, NSW, G. Williams and D. Gerrand, a report for GTCC and Coastcare). The report establishes strategic planning priorities for the conservation of threatened plant communities.

He is also completing a series of littoral rainforest restoration action plans for eight littoral rainforest remnants in the Manning Valley. This is an Environmental Trusts of NSW funded project. In addition, he is undertaking a local government Bitou Bush control strategy for the Manning Valley coastcare funded project. The weeds survey report will help further establish the case for inclusion of littoral rainforests on the NSW Threatened Species Act 1995, as a threatened ecological community.

Reports from the NT indicate that *Pheidole megacephala* has been eradicated from 3ha in Howard Springs Nature Park and native ant return is being monitored. Plans are underway for a complete eradication program for the entire Nature Park (approximately 30ha). The eradication process involved a combination of fire, seasonal timing and poison. The project was conducted by **Kate Trumper** from the University of Sheffield in the UK under the supervision of **Alan Andersen** and **Ben Hoffmann**.

Responses of ants to sulphur dioxide emissions from Mount Isa Mine in Qld have been studied by members of Alan's group. Abundance and richness of ant communities were lowest in sites closest to the mine. Both positive and negative associations with sulphur emissions were found.

Large scale spider surveys are being conducted for the first time in the NT, revealing high levels of species richness and turnover across soil types and in terms of annual rainfall. The discovery of a rich semi-arid adapted fauna indicated that there is much to learn about biogeographic patterns and apparent radiations in some groups (which are also challenging recent taxonomic revisions). A recent trip to ANIC by staff has also clarified that the northern beetle fauna contains a wealth of new taxa.

Robin Gunning has continued as our representative on the NSW Scientific Committee set up under the NSW Threatened Species Act (1995), while **Jonathan Majer** is serving on a parallel committee in WA - the Threatened Species Scientific Committee, which was set up under the WA Wildlife Conservation Act. **Jonathan Majer** made a submission on behalf of the Society to the Australian Quarantine and Inspection Service concerning an Import Risk Analysis on the

importation of introduced mushrooms.

As I have mentioned before, the activities of the Conservation Committee are partly driven by information received from Society members - they are encourage to contact the Convenor if they believe that any issues should be addressed. They are also encouraged to nominate to **Robin Gunning** or **Jonathan Majer** or other Conservation Committee members any species which they feel should be considered for listing as rare or endangered by the Commonwealth or in the appropriate State or Territory.

Finally, **Peter Dostine** and **Genevieve Carruthers** have decided to resign from the Conservation Committee due to changes in their location and/or work interests. On behalf of the Society, I thank them for the services that they have provided to this Committee.

Jonathan MAJER
Convenor, Conservation Committee

Report of the Organising Committee of the 29 AGM and Scientific Conference

Members of the Organising Committee for the 1998 conference in Brisbane were: **Margaret Schneider** (Convenor), **Lindsay Barton Browne, Chris Burwell, Judy King, Toni Withers** (until March 1998), **Tony Clarke** (who replaced Toni Withers), **Des Foley** (latter part of 1998) and last, but by no means least, **Sally Brown** of the UQ Institute of Continuing and TESOL Education (ICTE), the Conference Secretariat.

Because the AES Conference was run in conjunction with the 6th Australasian Applied Entomological Research Conference a number of deviations from the typical AES program were made. The most significant of these was the short scientific program which run for just two days. The program understandably contained much less emphasis on pest control and applied research but was not devoid of applied papers. The program included three short symposia on the topics:

Medical Entomology in Australia (coordinator **Des Foley**)

Hardwood Forestry Entomology (coordinator **Judy King**)

Insect Movement (coordinators **Toni Withers, Tony Clarke** and **Lindsay Barton-Browne**)

In addition to invited and contributed papers dealing with the symposia topics, contributed papers on insect and arachnid systematics, biocontrol and insect parasitoids, insect pest biology and ecology and other general papers were accepted. A total of 63 papers was presented over the two days. To accommodate this number of papers in so short a time, the Committee found it necessary to schedule five concurrent sessions. We accept that some clashes of interest with concurrent sessions are inevitable but hope that these were few with the minimum of frustration. A total of 168 delegates attended the Conference. Most of the delegates from outside Brisbane stayed at Emmanuel College to whom we express our appreciation for their continuing good service to entomological activities on Campus.

Conference social activities included a welcome reception and barbeque on Saturday evening and the Annual Dinner on Monday evening atone of Brisbane's most picturesque restaurants, "Oxley's on the River". The entomological limericks competition provided a chance for delegates to display their literary skills. Congratulations to **Dinah Hales** for winning the pack of Guinness.

Tuesday was to be a "link day" between the two conferences and constituted a field day with a number of excursions available to suit various entomological interests.

The Phil Carne Prize was won by **Martin Steinbauer** of the University of Tasmania. Martin presented his award winning paper, "Overwintering physiology of two species of *Amorbus* (Coreidae)", on Saturday evening in the middle of the Annual General Meeting. The winner of the Best Student Conference Paper, **Tara Simmul**, is also from the University of Tasmania. Tara's paper was titled "The Fireblight Beetle and Host Choice - *Acacia dealbata* vs *Acacia mearnsii*". The Society warmly congratulates both of these students.

Once again the University of Newcastle provided most of the entries for the Illustration Competition. The prize winners were:

Colour Illustration

1st - **Michael Shea**, University of Newcastle

2nd - **Belinda Campbell**, University of Newcastle

3rd - **Maggie Chou**, University of Newcastle

Black & White Illustration

1st - **Geoff Thompson**, Queensland Museum

3rd - **Hannah Ein[illegible]**, University of Newcastle

Photography

1st - **Anthony O'Toole**, University of Queensland

The logistics of running two conferences together were at times daunting. Offering choices

of both or one of either conferences, working out the individual and combination costs, sorting out where sponsorship money should go - these were just a few of the unusual matters to resolve. I want to acknowledge the foresight and determination of **Myron Zalucki** who was the driving force behind the concept from the beginning - it all finally happened, Myron - Congratulations.

One of the first things Myron did in the early days of planning the joint conference meeting was to employ a Conference Secretariat. This caused me all kinds of concerns because the cost for registration consequently jumped dramatically from what AES delegates are used to paying. However I soon stopped even thinking about the issue. Without the exceptional organisational skills of **Sally Brown** I am sure that we would not have managed to run the conferences. I regularly found myself comparing the amount of work involved as Convenor for this conference and for the same conference ten years ago - really there is no comparison. As more and more pressure is placed on our professional time, I believe the days have passed when a conference such as this can be organised within the working days of professional entomologists. Sally's efficiency, experience and the amount of time she saved innumerable people, have been worth every cent of the increased fee.

The Organising Committee is grateful for support from numerous organisations and especially from: CRC for Tropical Pest Management; Dept of Entomology, University of Queensland; Monsanto Australia Ltd; and Dow AgroScience. Our thanks also go to the UQ students (**Chris Gough, Ekhlass Jarjees, Huang Kui, Andrew Ridley, Mark Schutz**) who gave of their time to help in all kinds of ways throughout the conference week. Finally I want to thank most sincerely the members of the Organising Committee for their enthusiasm and willingness to so ably carry out all the tasks involved in making the Conference a success.

Margaret SCHNEIDER
Department of Entomology
University of Queensland

Martin Steinbauer receives his Phil Carne Prize certificate from Myron Zalucki

AES 29th Annual Conference
Conference Photo

Note: Conference Delegates who didn't collect their copy from the Registration Desk may receive a copy if they contact the Editor of this Newsletter

AES 29th Annual Conference
Dinner at "Oxleys on the River"

Top: Ian Dadour (WA), Sonya Broughton (Qld), Philip Gleeson (Qld), Francoise Berlandier (WA) and Laurence Mound (ACT)
Bottom: Phil Carne Prize winner Martin Steinbauer (ACT), Karyl Michaels (Tas) and Marie Yee (ACT) [photos: Murray Fletcher]

AES 29th Annual Conference
Dinner at "Oxleys on the River"

Top: Don Sands (Qld), Laurence Mound (ACT), Andy Austin (SA), Dinah Hales (NSW) and Alan Clift (NSW)
Bottom: Ian Naumann (ACT), new AES President Jim Cullen (ACT, Alison Roach (ACT and new NSW Regional Councillor Wendy Odgers (ACT) [photos: Murray Fletcher]

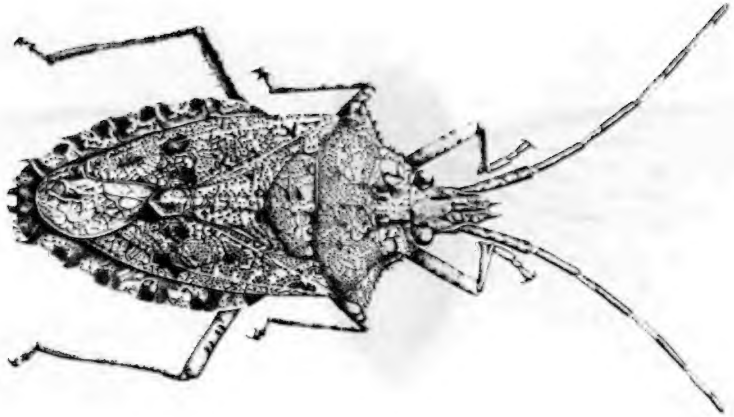
AES 29th Annual Conference
Dinner at "Oxleys on the River"

Top: Peter Gregg (NSW), Cclin Tann (NSW) and Alistair Drake (NSW)
Bottom: Table 4 [photos: Murray Fletcher]

AES 29th Annual Conference
Dinner at "Oxleys on the River"

Top: Conference Organiser Sally Brown (ICTE, UQ), Glynn Maynard (ACT), Jacinta and Myron Zalucki (Qld), Linda and Tony Clark (Qld)
Bottom: Jim Cullen (Qld), Patrick Huber (Qld) , Darrell Kemp (Qld) and Max Whitten (NFA)
[photos: Murray Fletcher]

AES Conference
Illustration Competition



Top: First Place, Black & White. **Geoff Thompson**, *Bellendenum gonyxuthum* Matthews (Tenebrionidae)
Bottom: Second Place, Black & White. **Lesley Elkan**, Pentatomidae

AES Conference
Illustration Competition

Top: First Place, Colour. **Michael Shea**, *Trapezites symmomus symmomus* Hübner, (Hesperiidae)
Bottom: Second Place, Colour. **Belinda Campbell**, *Cyclochila australasiae* (Donovan), (Cicadidae)

AES 29th Annual Conference
Limerick Competition

A limerick competition was held as part of the AES Conference with the entries read out at the conference dinner. Prize for the best limerick (a pack of Guinness, what else!) was won by **Dinah Hales** who not only wrote the best limerick but backed it up with a sonnet as well, both featuring the conference logo, *Peltocopta crassiventris* (Tessaratomidae). The biology of this fascinating insect had been explained earlier in the conference in a paper by **Geoff Monteith** in which he explained that the first and second instar nymphs are carried on the concave ventral surface of the adult female whose body is modified for this purpose. Dinah's winning limerick and her sonnet are printed here, together with a photo of Dinah reading them to the assembled gathering.

We heard *Peltocopta* bemoan
Weighed down by child-rearing alone
"I'm feeling pathetic
My kids are phoretic
Can't wait till they're off on their own."

The Reproductive Biology
of *Peltocopta crassiventris*
by **Dinah Hales**

Handsome is he, with spotted margin bright
Proud on *Mallotus* tree, regards his bride.
She, a pale wraith with figure spreading wide,
Receives her lover in the early light,
And being bugs, they join from dawn till night.
Then he is gone - he hastens from her side,
And she, alone, must needs with eggs abide,
And guard them well from hymenopterans sight.
At last they hatch, at last the time has come -
A clutch of babies, flat and pale as Mum,
And limpet-like, they cling beneath her tum
And pack the hollow there, from chest to bum.
Oh God, she cries, give mercy unto me,
I have to lug these kids till instar three.

Members of CHAEC take a break from their annual meeting, which was held immediately prior to the AES Conference, Back row Left to right: Max Moulds (AM), Murray Fletcher (ASCU), Margaret Williams (TDPIF), Ebbe Nielsen (ANIC), Glynn Maynard (AQIS), Margaret Humphreys (MAMU), Andy Austin (WAITE), Mali Malipatil (VAIC), Trevor Crosby (NZAC), Dick Bashford (TFC), Chris Ann Urquart (FCNI), Greg Daniels (UQIC), Front row: John Donaldson (QDPI), Andy Szito (WADA), Geoff Monteith (QM) and Chris Burwell (QM)

6th AAERC, Brisbane. Left to Right: David Yeates (UQ), Andy Austin (Univ. Adelaide), Laurence Mound (ANIC), Mike Schauff (USNM), Murray Fletcher (NSW Ag.) and George Roderick (Univ. Hawaii) [photo: Liza Miller]

6th AAERC, Brisbane. L to R: Don Sands (CSIRO, Indooroopilly), Harry Fay (QDPI, Mareeba) and Ross Field (Museum of Victoria, Melbourne) [photo: Murray Fletcher]

6th AAERC, Brisbane. L. to R: Matt Cahill (QDPI, Ayr), Russell Messing (Univ. Hawaii), Bruce Tabashik (Univ Arizona) and Rick Roush (CRC Weed Management Systems, Adelaide) with Neil Forrester (NSW Ag. Narrabri), Ian Denhold (Rothamstead, UK) and Grant Herron (NSW Ag. Menangle) in the background. [photo: Murray Fletcher]

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

Plant Quarantine Policy Branch, Australian Quarantine and Inspection Service, Department of Primary Industries and Energy

New staff continue to arrive in the Branch following the recruitment drives early this year. We expect the last of our new-starters to arrive in the next few months. **Tingkui Qin**, recently from Landcare Research Ltd New Zealand, took up one of these positions and we hope to put his mite and mealy bug expertise to good use. **Penny Greenslade** has been working on contract in the Branch and is busy completing the entomological component of an Import Risk Analysis on fresh mushrooms. We hope to keep her on to develop a mushroom handbook for our inspectors and quarantine entomologists.

Sadly for us, **Marion Healy** will soon be leaving AQIS to take up a position as the Chief Scientist of the Australian and New Zealand Food Authority. Marion has been a very well respected and popular member of the Branch and will be sadly missed. We wish her all the best in her new job with ANZFA.

A sizeable contingent from the Branch headed up to Brisbane at the end of September to attend a variety of entomological meetings/conferences. **Kay Lindsay, Chinthaka Karunaratne** and **Alison Roach** attended a three day Acarology Workshop run by **David Walter** (Uni of Qld). State based AQIS quarantine staff **James Walker, Mohamed Mekhamer, Bill Crowe, Diane Cooper** and **Mike Grimm** also attended the workshop. Participants enjoyed the workshop which gave excellent presentations on mites of quarantine significance. Much value was obtained through discussion sessions and the observation of living and preserved mites which unfortunately left less time for reviewing slide-making skills. **David Walter** was ably assisted by **Catherine Bryant** (Uni of Qld), **Danuta Knihinicki** (NSW Ag, Orange) and **Margaret Williams** (DPIF Tas) who gave presentations on tarsonemid, eriophyid and tetranychid mites, respectively.

Glynn Maynard, Alison Roach, Wendy Odgers, Kay Lindsay, Chinthaka Karunaratne and **Satya Yadav** attended the two day Plant Quarantine Entomologist's Meeting along with staff from other areas of AQIS: **James Walker, Mohamed Mekhamer, Mike Grimm, Diane Cooper, Judy Grimshaw, Jody Christianson, Brian Read, Bill Crowe** and **Ian Barrass**. It was a valuable opportunity for our Canberra-based policy people to meet the regional quarantine entomologists and *vice versa*. The emphasis of the meeting was how to achieve consistency in the delivery of inspection services nationally. AQIS Operations have recently agreed to recruit five new support staff to help the regional scientific staff strengthen their scientific capabilities in the field.

Glynn Maynard, Alison Roach, Wendy Odgers, Chinthaka Karunaratne and **Satya Yadav** stayed on in Brisbane to attend the AES Meeting. **Alison Roach** charmed her work peers with renditions of the "Catalogue of Australian Cockroaches" by A. Roach (Zoo. Cat. vol 23, mentioned later in this report). Several ex-CSIRO employees now working at AQIS are reported to have danced up a storm with former CSIRO Entomology Chief **Max Whitten** and current Chief **Jim Cullen** [*photo available on request - Ed.*]. **Satya Yadav** and **Tingkui Qin** attended the subsequent AAERC. In late September, **Wendy Odgers** also attended a Fruit Fly Molecular Diagnostics meeting in Sydney organised through the Office of the Chief Plant Protection Officer.

With the expansion of staff numbers in the Branch and associated movements, we expect that temporary positions will become available for individuals with experience in entomology. At any one time we expect to have between 1 and 3 entomology related positions that would be filled on a temporary or secondment basis for between 2-12 months. We also expect that the opportunity may arise for 1-2 year contract positions during the next year. AQIS keeps a temporary employment register for those who may be interested in applying for these temporary positions. If you are interested or know of anyone who would be interested in these positions please contact the ACT Regional Councillor **Wendy Odgers** on 02 6272 5322 for further details.

Bureau of Resource Sciences, Department of Primary Industries and Energy

Ian Naumann has been settling in to his new role within BRS. In Sept he was in Brisbane for the combined Entomological Society-Aust. Appl. Ent. meetings. In October he was in Sydney discussing disinsection of international aircraft with AQIS staff. **Karina Mclachlan**, recently graduated from the

University of New England, has just joined Ian to assist with various entomological projects. Wearing a BRS hat, Ian has become a member of the newly established Australian and New Zealand European Wasp Working Group. In October Ian met with **Joanne Daly** and **Geoff Clarke** (CSIRO Entomology), **John Burley** (Dept of Natural Resources and Environment, Victoria) and **Gerry Maynes** (Environment Australia) to prepare an agenda for this Working Group.

Australian Plague Locust Commission,
Agriculture and Forests Group,
Department of Primary Industries and Energy

David Hunter, Ted Deveson and **Graeme Hamilton** attended the AES and AAERC meetings in Brisbane and hated the sumptuous breakfasts and early morning ferry ride so much they voted to move the APLC to Brisbane permanently. Despite the hardship, some important business was done and contacts established. During October **Peter Spurgin** spent 2 weeks in PNG assessing their migratory locust problem, training staff and recommending future contingency plans.

Australian Biological Resources Study,
Environment Australia

The ABRS news for the moment is that Volume 23 of the *Zoological Catalogue of Australia* — covering the Archaeognatha, Zygentoma (or Thysanura), Blattodea, Isoptera, Mantodea, Dermaptera, Phasmatodea, Embioptera and Zoraptera — was on the shelf on 2 September. Several other insect volumes are in preparation — the Heteroptera: Pentatomomorpha, Diptera: Nematocera, Lepidoptera: Hesperioidea, Papilionoidea and the Coleoptera: Eucinetoidea, Dacilloidea, Buprestoidea. **Keith Houston** attended the Australian Entomological Conference in Brisbane in September, launching the two latest Catalogue volumes, the Volume 29.6, Elateroidea and the above Volume 23.

Division of Botany & Zoology
Australian National University

The coccidologists from BoZo's entomological group all trekked to England at the end of August to attend the VIIITH International Congress of Scale Insect Studies (ISSIS) held at Wye College, University of London, Kent. An enjoyable time was spent by all and hopefully the northern hemisphere coccidologists are now a little more in tune to cladistic studies and the use of molecular data for estimating phylogenies.

Holly Trueman presented a talk from her honours research on margarodid phylogenetic studies using molecular data and also gave an informal presentation highlighting some of the difficulties and pitfalls of molecular phylogenetic analysis. Holly was the youngest participant at the symposium and one old man of coccidology fondly likened her to a crawler (the first-instar nymph of scale insects) just beginning her life as a coccidologist (Holly, of course, has other career ideas).

Lyn Cook gave two talks at ISSIS: the first dealt with the extraordinary nature of our Australian gall-inducing eriococcid genus *Apiomorpha*, the evolution of which is the subject of her PhD research; the second talk was an overview of scale insect phylogeny as estimated from 18S RDNA data and was based on the combined data from Holly's margarodid work and Lyn's eriococcid studies (this talk was also presented as a joint poster at ISSIS). In addition, Lyn presented a poster on one aspect of eriococcid morphology which has the potential to confuse cladistic analyses. Lyn's morphological interpretations derive from her taxonomic research on Australian non-gall-inducing eriococcids, which is funded by ABRS.

Penny Gullan and Lyn presented a co-authored paper on the question of whether cochineal insects (the genus *Dactylopius*) are really eriococcids rather than the sole members of an autapomorphic family, the Dactylopiidae. Penny also gave an informal talk on why the use of the paraphyletic taxon Homoptera should be abandoned.

Jun Lit, who is a PhD student at the University of the Philippines at Los Baños and externally supervised by Penny, gave a talk on the very complex anal morphology of lac insects (Kerriidae) and also presented a co-authored poster on ant-attended mealybugs on bamboo in the Philippines. Jun and Penny later visited **Doug Williams** to discuss scale insect matters and Jun then spent 3 days examining lac insects and other scales at The Natural History Museum in London. Penny spent almost 2 weeks at the NHM mostly working on Australian soft scales (Coccidae) as part of a collaborative taxonomic project with **Chris Hodgson** (the research part of Penny's visit to the UK was funded by the Australian Academies - Royal Society Exchange Program). Chris and

Penny also had many fruitful discussions on Australian coccids during her visit to Chris' department at Wye College.

Wendy ODGERS
Regional Councillor

CSIRO
Natural Resources and Biodiversity

Rob Floyd was in Brisbane for various quarantine and forest entomology meetings 2-6 November, in the Upper Murray talking to Landcare groups 16-17 November, in Darwin 19-20 November and in Melbourne for the Forestry Sector meeting on 23 November. **Ebbe Nielsen** will attended the ABRS Fauna Committee meeting 3-4 November, a CSIRO Publishing Board meeting on 11 November, the Joint Meeting of Science, Technology and Innovation Agencies in Australia and New Zealand, 26 November, and the Invertebrate Taxonomy Editorial Committee meeting on 27. **Pete Cranston** has been appointed **Deputy Program Leader** of NR&B.

Ev and Marion Schlinger, Santa Ynez, and **Mike Irwin**, University of Illinois, Champaign/Urbana, USA, visited the ANIC on Friday, 13 November. **Cheryl O'Dwyer** will be visiting the Invertebrate Conservation Biology project for the period 22 November-12 December to help out with survey work for *Synemon plana* in the Harden/Young area.

Ebbe Nielsen has been elected a Foreign Fellow of The Royal Danish Academy of Sciences and Letters. It has also just been announced that Ebbe has been elected to the Council for the International Congresses of Entomology. He also participated in two meetings concerned with the Global Taxonomy Initiative under the Convention on Biological Diversity (CBD). For quite some time the Major Systematics Entomology Facility group has worked towards a number of major shared projects. The first workshop to detail these plans was concerned with butterflies and resulted in a proposal for the Global Butterfly Information System (GloBIS) consisting of a pilot project and a three year program. The whole meeting was apparently "a most uplifting experience".

Two more volunteers, **Ted and Cynthia Beasley**, have started work in the Hymenoptera Project. They have been assisting by sorting Malaise trap samples and are helping to tidy the collection in preparation for the expected influx of visitors during the International Hymenopterists Conference in Canberra in January. **Jeremy Hawes** has cut back his volunteering to one session per week while he is working part-time. A rush of registrations for the Hymenopterists' Conference was received in late September and early October and **Jo Cardale** has been kept busy entering them in the database.

Helen Tongway has spent eight weeks working through the ANIC's Longicorn beetle collection, the entire collection in need of recuration with degraded pins being the most common problem. The end result is a collection that now matches the rest of the ANIC material. Helen's skill and patience at removing severely corroded pins has been invaluable.

The ANIC Technical Training Course was unusually well received this year. The comments solicited at the course's completion being highly complimentary. Three participants attended from SE Asia, one from Vietnam and two Indonesians. Their attendance was made possible with financial assistance from the Crawford Fund and CSIRO International. It is hoped the initial contacts made through **Tran Huy Tho**, a Vietnamese participant, will be the beginning of further links with that country.

A number of remaindered book titles have been purchased and are now on sale through the ANIC Bookshop. Two WEB pages advertising the remaindered books and a special offer for posters are as follows

For books:
http://www.ento.csiro.au/research/natres/sale_books.html

For posters:
http://www.ento.csiro.au/research/natres/sale.html

The latest *ANIC News (#13)* is to receive a new look, with Entomology graphic artist **Soussi Nokham** completely redesigning the layout giving the *News* a more up-to-date look.

The ANIC Volunteers Scheme continues to grow, 12 persons now participating. A morning tea, held in early August, gave volunteers a chance to meet CSIRO Entomology senior management. Entomology Chief **Jim Cullen**, Program Leader **Rob Floyd** and ANIC Director **Ebbe Nielsen** welcomed the volunteers, taking the opportunity to explain some of the Division's other research activities. **Jim Cullen** emphasised the important role the ANIC takes in these projects and the valuable part that volunteers can play in maintaining the collection's extensive holdings.

Kim Pullen, Identification & Advice Service, has

been busy writing to a number of key food industry groups, including commercial companies and representative industry bodies. Kim's aim is to attract more business in this area, specifically in identifying insect food contaminants, and helping to find out where they came from and how and when they might have entered the food. A couple of food companies are already on the IAS's books, contributing a steady stream of jobs.

Dave Rentz is seeking funding to produce an easy-to-use identification guide to Australian Grasshoppers and Locusts (Acridoidea only). Photography will be used to illustrate the book with the ANIC Collection serving as the database for the distributional and seasonal data. The project will be co-authored by **Bob Lewis** who has spent several decades photographing Australia's grasshoppers. Dave is keenly interested in suggestions of potential funding sources for such an endeavour. Descriptive work has concluded for Volume 3 of the Monograph of Australian Tettigoniidae. Now the task of measurement, map construction, illustration and plate assembly to bring the project to fruition.

Dave Rentz and **Penny Greenslade** participated in an Education and collecting expedition in Myanmar (Burma) sponsored by the Smithsonian Institution. This is part of a continuing commitment by the Smithsonian in Myanmar aimed at educating parks and sanctuary officers in conservation and biology in general. It is a joint endeavour with the Myanmar Ministry of Forestry. In addition, **John and Dan Polhemus** were responsible for hemipteroids and odonates, **Dr Coddington** covered spiders and miscellaneous Orders, **Harrold Shillhammer** from the Vienna Museum covered beetles and Post-Doc student **Renner Baptista** (from Brazil) added expertise to spiders with Dr Coddington. **Chris Wemmer**, Director of the Smithsonian Conservation and Research Center and Assistant Director of the National Zoo organised the trip and all of the others which have been done at the rate of two per year since 1994. We were certainly happy to have been a part of the team in 1998.

Rob Floyd and **Mary Carver** participated in a telephone conference at AQIS, Barton, ACT, with quarantine officers and foresters from ACT, NSW, VIC, and WA, concerning *Essigella californica*, a recent adventive aphid now widespread in south-eastern Australia on *Pinus radiata*, our principal plantation tree.

Do not spray the aphids on your roses! They are being biologically controlled! In 1990, **Jörg Kitt**, a PhD student at the Waite Campus, University of Adelaide, introduced from Italy the parasitic wasp ***Aphidius rosae*** (Hymenoptera: Braconidae) as a control agent. It became established in the Adelaide region and, last Spring, was found in Canberra in large numbers and subsequently also in Goulburn, Yass, in the Riverland, and on the 'south coast'. It has survived the winter here and its mummies can be seen on the flower buds and leaves of rose.

Tony Dixon, University of East Anglia, Norwich, England visited the Hemiptera project briefly and discussed our indigenous aphids.

Tony Wright of CSIRO Long Pocket, recently found thrips interfering with the water hyacinth plants on which he was rearing a dull-looking small moth for a biological control project in Thailand. The thrips was clearly a genus not recorded in Australia, and after much e-mailing and mailing of specimens **Laurence Mound** identified it as ***Organothrips indicus***. A paper in the latest issue of Oriental Insects lists this species from several sites in the Oriental region on *Typha*, and also a few specimens from Florida on water hyacinth. It is the only known truly aquatic thrips. The very active volunteer, **Roby Fraser**, has now deserted thrips and ANIC - inevitably these days it seems for a job at AQIS. **Diane Cooper** of AQIS Sydney visited for two days training in technical methods of thrips handling and identification.

The Bookmark project progresses well due in no small part to **Suellen Grosse**'s hard work and communication skills. A series of progress reports sent to the participating schools in the project were very well received and managed to revive some of their enthusiasm for the project. Unfortunately, the recent heavy rains in NE Victoria and the seasonal snow melt has resulted in an unexpected 'high water' in the Murray River which is expected to hit Renmark in early November. If the predicted levels are correct we are likely to find all our trap sites under water (one of the problems with working in floodplain habitats). The local communities are keeping a close watch on the situation and are ready to pull out the traps, if needed.

Another part of the Bookmark project involves a translocation project for the critically endangered *Ogyris* butterfly which is known from only a couple of very poor sites in the area. Recently a series of media articles has been put out asking the public

to keep a look out for it which has resulted in potentially three new sites being found. We will be checking out these sites during our forthcoming trip.

On the golden sun moth front, things are hotting up for the upcoming field season. We have been contracted to do more survey work in NSW following the success of last season's efforts for which we located ten new populations. In addition, the ACT Government has contracted us to undertake a detailed site survey of the Belconnen Naval Station site to assist in processing the development application to turn the site into a new Canberra suburb.

We also understand that we have been successful in obtaining funds to write the Action Plan for Australian Butterflies which will primarily involve **Don Sands** and **Tim New** and also funding for the development of an information system for Australia's rare and threatened invertebrates.

The VIIth International Colloquium on Invertebrate Pathology and Microbial Control and the IVth International *Bacillus thuringiensis* Conference was held in Sapporo, Japan in August. **Robin Bedding**, **David Dall**, **Ray Akhurst**, **Cheryl Beard** and **Irandokht Zolfaghar** represented CSIRO Entomology.

CSIRO Stored Grain and Structural Pests

All members in the Structural Pests (Termite) section have made a number of trips to Darwin to examine and collect material and data from existing field trials, and also to set up new trials. They were joined for part of the time by **Graham Thompson** (La Trobe University) who is working on the molecular taxonomy of Kalotermitidae. Despite the long working days, **Leigh Miller** reports that he did find time to go fishing for 'barra'.

Several members in the Stored Grain Research Laboratory travelled to Beijing to attend and present papers at the 7th International Working Conference on Stored Product Protection. **Peter Annis** chaired the session with the largest number of papers presented at the conference (Fumigation and Controlled Atmospheres), **Jonathan Banks** co-chaired the workshop on the future of fumigation, **David Rees** co-chaired the session on bio-control, and **Jane Wright** co-chaired the session on sampling and trapping. After the conference, **Jane Wright** spent three weeks on a study tour of grain storage organisations and institutes. She reports that the Chinese appear to have the same problems with psocids that we do in Australia.

Jonathan Banks reports he has been busy editing papers presented at the APTC and that the Proceedings are now with the printer. He has revisited hermetic storage and believes that he has found the earliest recorded use of nitrogen for grain storage (1854 in Paris). He is now seeking a lead to a similar reference for carbon dioxide which he believes was used by the Paris Tramway Company to disinfest horse fodder. Jonathan is involved with 'real' entomology in his orchard (registered organic) where he is using pheromones and *Trichogramma* to control pests of apples. "Psocid Man' **David Rees** believes he has discovered another genus to add to the list of those found associated with stored grain in Australia.

A visitor to the Laboratory, **Johannes (Hannes) Steidle** of the Free University of Berlin is spending four months with **David Rees** and **Jane Wright** examining use of *Trichogramma* spp. to control moths infesting stored products.

Marcus MATTHEWS
Regional Councillor

NEW SOUTH WALES

Orange Agricultural Institute
Agricultural Scientific Collections Unit

ASCU on the Web - after advertising everybody else's web page over the last few years in *Myrmecia* it is gratifying at last to announce that our own Unit now has its own web page at:

http://agric.nsw.gov.au/Hort/ascu

Please check it out, especially the identification keys, and send any comments for improvement to the authors. The site features information on the staff of the Unit and the members of the Trust, as well as information on various agriculturally important insect groups, including keys for the identification of leafhoppers of economic importance in Australia (by **Murray Fletcher**) and fruit flies of NSW (by **Peter Gillespie**). An Art Gallery of images of the insect paintings made in the 1920s by **Emil Zeck** and the plant disease paintings made in the 1960s by **Margaret Senior** is also available on the site. A number of other additions to the site are in an advanced stage of development, so check the site regularly! With the withdrawal of a large number of entomological

Agfacts, **Peter Gillespie** and **Merydyn Davison** are also revising the old versions of the most useful of these to produce electronic versions for the website.

Danuta Knihinicki was invited to Brisbane at the end of September to present a day's workshop on eriophyid mites as part of a University of Queensland Mite Training Course.

Murray Fletcher represented the Unit at the CHAEC (Council of Heads of Australian Entomological Collections) meeting in Brisbane followed by the AES Annual Conference followed further by the 6th Australasian Applied Entomological Research Conference.

The Unit has been active in the PR area, with displays publicising the work of the Unit at local functions. The displays have included computer-based slide shows on insects and plant diseases, demonstrations of our new website, specimen displays and drawers and posters, including the excellent new poster advertising the AES. On 25 October we were at the Orange Botanic Gardens as part of the 10th Anniversary Gala Day celebrations which featured a range of dignitaries, including His Excellency, **Gordon Samuels** AC, Governor of NSW. On 31 October we filled an entire science lab as the guest exhibitors of the Science Department at the Annual Kinross Wolaroi School Open Day.

We also featured at the Australian National Field Days (ANFD) with the official launch, on Thursday 5th Nov, of the ASCU Web Site. **Helen Scott-Orr**, Executive Director (Research, Advisory & Education) and Chairman of the Agricultural Scientific Collections Trust, did the honours in the presence of a good crowd of departmental personnel, ANFD visitors and media. **Murray Fletcher** was interviewed by Prime TV but appears to have ended up on the cutting room floor. **Merydyn Davison** scored a spot on the local radio station on Saturday morning, transmitted from ANFD.

Visitors to the Unit have included **Peter Allen** from South Australia who was in Orange for a Rabbit Calicivirus Meeting and **Ros Blanche** from University of the Northern Territory who spent a week in November with **Murray Fletcher** learning all she could about identification of leafhoppers.

ASCU Falls - Twice in the last month the airconditioning water pipes in the roof of the ASCU building have burst and created a waterfall through the ceiling in the Herbarium. Quick action by the staff of the Unit appears to have limited the damage to Herbarium boxes and rescued the specimens themselves. Modifications are being made to the airconditioning units and alterations to the ceiling itself should provide failsafe mechanisms against similar damage being caused through future accidents of this nature.

We also had a good test of our fire systems when (name suppressed) accidentally set off the fire alarms in the Laboratory. Staff of ASCU and the Sheep Industry Development Centre evacuated the building for their designated areas and the Orange Fire Brigade were quickly on the scene, followed by reporters from the Central Western Daily. Fortunately, the trigger was not severe enough to cause the discharge of the Inogen gas cylinders, which would have severely dented our budget for the remainder of the year.

Murray FLETCHER
ASCU

Centre for Entomological Research and Insecticide Technology (CERIT)
University of New South Wales

In October, CERIT's "Australian Termite Management 1998" industry briefing symposium was a very successful venture with about 150 attendees from wide ranging groups and places. Representatives from councils, insecticide companies, building companies, pest control operators, property inspection companies and research bodies were present to hear expert speakers discuss the latest advances in termite management. There were several interstate visitors as well as one from New Zealand. Speakers included **Michael Lenz**, CSIRO Entomology; **Brenton Peters**, QLD DPI Forest Research Institute; **Anne-Marie Poirrier**, Systems Pest Management; **Doug Howick**, AEPMA; **Peter Meadows**, Meadows Consulting; **Allen Schofield**, TAFE & OTEN; **Andrew Dunn**, Timber Development Association (NSW); **Gavin Hall**, NRA; **Steve Broadbent**, Chrysalis Scientific; and **Barry Miller**, NSW Fair Trading. Topics included biology and systematics, biological control, chemical and physical barriers, integrated termite management, building practices, product registration and legal aspects.

Julie-ann Short is currently on maternity leave, and we wish her all the best for the new family addition. Her replacement is **Nicole Honeyman** who has postponed her overseas trip and decided

to stay in Sydney.

Recent visitors to CERIT have included: **Michael Gibian, Phil Ridley & Micky Urosevic**, Reckitt & Colman Australasia; **James Walker**, AQIS; **Annabel Duncan**, CSIRO Molecular Science; **Warren Sterling**, CSIRO; **Steve Allen**, RSA Inspections; **John Papadopolous**, Eagle Pest Control Perth; **Joseph Symond**, Insect Repellent Wrist Bands Pty Ltd; **John Raff** and **Barry Matthews**, BRI

NORTHERN TERRITORY

Parks and Wildlife Commission of the NT Conservation Management Unit

About the only thing entomological to have disturbed **Colin Wilson**'s last couple of months of leave, interstate meetings and middle management courses was the furtive scurrying away of cockroaches and silverfish when he began to shift the accumulated pile of paperwork on his desk. And the season's first mouse spider (*Missulena* sp.), marinaded in Baygon, was presented for identification. The good early rains promise a bumper crop of recycled jam jars for all Darwin entomologists.

Northern Territory University

Having come back from the Sixth Australasian Applied Entomological Research Conference at Brisbane, during which **Rengkang Peng** had a lot of interesting discussion with tropical entomologists about the potential use of green ants as an important component for the IPM of some tropical fruit crops, Peng is now busy harvesting cashew nuts from his experimental plots (21 hectares!). His research report "Impact of Native Vegetation on Cashew Insect Pests with particular reference to the most important pest - *Helopeltis pernicialis*" has been published by Rural Industries Research and Development Corporation (RIRDC) in July 1998, pp70, ISBN 0 642 54091 8. This work suggests that native vegetation close to cashew crops helps increase the diversity of insects and spiders in cashew orchards and also increases green ant and other natural enemy populations leading to improved yields. For those who are interested in obtaining a copy, please contact RIRDC on 02 6272 4735.

Medical Entomology Branch

The highest tides and early rains have arrived earlier than usual and the branch has had to become very active on the helicopter mosquito control program. With **Gwenda Hayes** on maternity leave, expecting in early November, the operational responsibility has fallen on **Jane Carter** who will be acting in Gwenda's position for twelve months. Gwenda has been toiling away on the branch database while on leave as well as attempting a GIS subject with a project on exotic *Aedes* exclusion. The baby will arrive with first hand expertise in computers!

Jane is being ably supported by a number of temporary and casual staff, including **Dan Richards, Bernadette Haigh, Nathan Barrett,** and **Tarun Williams**, who are filling in for absent staff. These people have been thrown into the deep end but have responded tremendously and our first big operation of over 200 hectares of control in Leanyer swamp near Darwin was very successful and prevented another plague of salt marsh mosquitoes invading residential areas.

Peter Whelan and **Martin Shivas** were NT representatives at the recent Mosquito Control Association of Australia conference at the Gold Coast in September. Peter presented papers on the exotic mosquito threat to the NT and the very successful mosquito control operations following the Katherine flood. Martin presented two papers on the larval biology of *Culicoides ornatus*, and was awarded the best student presentation, particularly for the innovative approach and contribution of the work to the understanding of biting midges.

Peter also assisted with others at the WA mosquito control course in Busselton at the invitation of **Tony Wright** and saw first hand the tremendous mosquito problems in that part of the world. Other issues to envelop the branch have been the rectification of a cockroach infestation in the hospital building, providing leadership in preventing new mosquito problems in the mining and extractive industry, and a lengthy court case as an expert witness in the planning for the future expansion of Darwin and the restriction placed on the expansion by mosquito and biting midge breeding areas and native title claims.

Brian Montgomery has been involved in the planning development and environmental impact comments, and liaising on engineering control to beat the wet season. Brian is trying to finish off a number of projects before he leaves the branch towards the end of the year and he asks anyone

who is looking for an experienced medical entomologist to give him a call.

Department of Primary Industry and Fisheries Weeds Branch

Nicole Ostermeyer joined the Biocontrol team in October after she finished with the fruit-fly eradication team. **Bertie Hennecke** was able to attend a Bioherbicide Workshop in Glasgow and the International Plant Pathology Congress in Edinburgh (really nothing to do with Entomology). The Edinburgh Festival was great. In September the federal government announced further funding for biological control of *Mimosa pigra*. That news created a few happy faces in the big biocontrol family at DPIF and CSIRO.

Entomology Branch

All Entomology personnel in addition to the Director of Resource Protection, Pesticides Coordinator and an entomologist from Agriculture WA in Kununurra attended a Branch conference to discuss and plan Branch issues.

No further detections of *Apis cerana* have been made. **Haidee Brown, Glenn Bellis** and **Lanni Zhang** have worked tirelessly over the past three months to examine specimens submitted for mite identification. All results to date have been negative. A supply of new chemical has arrived at Berrimah. **Michael Neal, Graham Young, Pat Dolan** and **Stuart Smith** are testing gels for repellency to *Mastotermes*. The results of the gel tests should provide an indication of the use of a carrier for the new chemical. **Deanna Chin** and **Heather Wallace** have had success with the use of commercially available biological control agents in mango and rambutan orchards. The predatory ladybird *Cryptolaemus montrouzeri* and the green lacewing *Mallada signata* were effective in controlling mealybugs, scales and redbanded thrips. **Stuart Smith** visited Kununurra with an AIAST representative group for a general examination of agriculture in the Ord Valley.

Northern Australia Quarantine Strategy

After the initial panic that always follows incursions of exotic nasties, things have quietened down for **Glenn Bellis**. The past few months have actually been spent looking at insects and catching up on paperwork.

Glenn BELLIS
Regional Councillor

QUEENSLAND

Griffith University

Heather Proctor is trying to find out whether the neglect typically accorded to aquatic mites in surveys of stream invertebrates is justified or if benthic biologists are missing a major component of diversity. So far it looks like generic richness of mites is close to that of Trichoptera at any given site, at least in South-east Queensland streams. **Romeny Lynch** (LWRRDC PhD student with the Centre for Catchment and In-Stream Research) is still sorting riparian malaise trap samples from Kakadu as part of her project on the importance of aquatic secondary production to riparian terrestrial food webs. She is daunted by the boxes of malaise and intercept trap samples from the channel country of South-West Qld and the Mary River catchment of South-East Qld that are yet to be sorted!

Queensland Institute of Medical Research

Brian Kay visited Hanoi from 2-7 August to discuss progress on a collaborative community based dengue vector control project using predacious copepods. Following a world first eradication result at the 400 household Phan Bio village, 35 km NE of Hanoi, the National Institute of Hygiene and Epidemiology team has now inoculated 11,000 households through 3 provinces. As dengue cases are double last year, they await anxiously to see if the 50,000 residents will be protected. Continuing his travels, Brian then visited the Navy Medical Research Unit (NAMRU 2) and Ministry of Health collaborators in Jakarta to set up second phase trials with new disposable sticky lures for *Aedes aegypti*.

Tonya Watson, who recently completed her PhD under the supervision of **Brian Kay**, has commenced work at the Mosquito Control Lab as the freshwater mosquito entomologist for the Local Authorities Research Committee (LARC). Tonya has been busy reviewing the current freshwater mosquito control practices of LARC members. Based on the variety of freshwater mosquito species and larval habitat types that have been identified as targets for control, tackling the freshwater mosquito problem should prove quite challenging.

Peter Ryan has completed his lab work and has embarked upon the dreaded process of writing his PhD thesis. Peter's work has focussed upon

defining the vector ecology of Ross River and Barmah Forest viruses in Maroochy Shire with the aim of developing effective control strategies. Peter hopes to submit his thesis early in 1999.

Louise Kelly-Hope has recently been awarded a University of Queensland Postgraduate Scholarship. Louise's study will investigate the epidemiology of Ross River and Barmah Forest viruses in Australia.

Recently, approximately 160 people (including the entire Mosquito Control Lab from QIMR) attended the 3rd national conference of the Mosquito Control Association of Australia (MCAA). The highly successful conference was held at the Mercure Resort, Surfers Paradise, from 23-25th September, 1998. One notable international participant was **Dan Ariaz**, President of the American Mosquito Control Association (AMCA). At the annual general meeting of the MCAA, Mr. Ariaz encouraged stronger ties between the two associations. At the same meeting, **Patricia Dale** (Griffith University) was elected to President. **Harry Standfast** (International Vector Consultants), as the former President, was thanked for his many years of service and leadership. **Michael Brown** (Mosquito Control Lab, QIMR) has also been elected to the executive committee of the MCAA. **Martin Shivas** from the School of Biological and Environmental Sciences, Northern Territory University, was awarded the student prize for his work on the larval biology and synchronisation of emergence of *Culicoides ornatus*. On the basis of the strong national and international support for the MCAA, the 4th national conference, to be held in the year 2000, promises to be a success.

CSIRO Entomology, Long Pocket Labs

The flagship project, biological control of *Mimosa pigra*, has been extended for another three years with a $2.1M funding boost from the Natural Heritage trust. This will allow the introduction of more biological control agents and the integration of biocontrol with other control options.

Rieks van Klinken has just received permission to release the sap-sucking psyllid *Prosopidopsylla flava* from Argentina. This psyllid is our second biological agent against mesquite (*Prosopis* spp.), a woody weed in semi-arid rangelands regions. **Gio Fichera** and **Areli Mira** will mass-rear both the psyllid and the leaf-tying moth (*Evippe* sp.) for releases in Western Australia, Northern Territory and Queensland throughout the summer.

The biocontrol of jatropha project is also making progress. Initial surveys by **Wendy Forno** and **Ricardo Segura** have suggested cerambycids as the most damaging natural enemies. Identifications have been obtained. **Tim Heard** put a proposal to AQIS to import into quarantine and travelled to the Dominican Republic in September to collect the agents and import them into Australia. **Richard Chan** is caring for them in quarantine, rearing them and planning preliminary host testing. Richard is also chasing species of Euphorbiaceae as host test plants.

Mic Julien went to Ivory Coast first two weeks on November on a consultancy on biological control of aquatic weeds (salvinia, water hyacinth, water lettuce) for FAO. Then to the IOBC (International Institute of Biological Control) workshop in Harare on biological control of water hyacinth from 16 to 20 November.

The Fourth edition of *Biological Control of Weeds. A World Catalogue of Agents and Their Target Weeds* compiled and edited by **Mic Julien** and **Manon Griffiths** is now at the printers and expected to be available in November.

A population of the moth *Xubida infusellus* (*Acigona infusella*) released on water hyacinth has survived to winter period and is increasing in the Logan area south of Brisbane suggesting that it is established. Concerted efforts are underway to increase the releases now that mass rearing problems have been solved.

Kazuhiro Amano from the Japanese Ministry of Agriculture visited **Tim Heard** for 10 weeks to work on stingless bees. Kazuhiro delighted all with his enthusiasm and humour. He learnt techniques for propagating stingless bees and assessing their role in pollination. He returned to Japan with four colonies which he will trial as pollinators of crops in glasshouses. These bees do not represent an environment threat as an invasive species as they will not survive the Japanese winter outside the glasshouses.

Gunter Maywald, Rob Sutherst and **Ben Collyer** spent two weeks running a global change and pest modelling workshop in Bogor in September for seven SE Asian countries. The workshop was well received with an enthusiastic assessment by delegates. The exercise highlighted the value of our two software packages - CLIMEX & DYMEX in being able to build models on the fly and so involve participants in the exercise. This

wins more ownership as well as understanding. Gunter is now off to North Queensland for a well earned rest until the end of the year. Ben leaves at the end of the month on completion of the RIRDC climate change project. He is going to map vegetation for the Queensland Herbarium.

We are in the process of starting a new RIRDC project to build a national electronic network for pest ecology and management - using models to facilitate national collaboration and to develop decision support systems that address crop protection as a whole rather than on a species by species basis.

Eric Rumbo has retired to model trains and searching the skis for stars after many years as a multi-disciplinary researcher in the chemical ecology group. **Veronica Brancatini** went to Pilau in September without being stranded once (how come their airlines always run on time?). She released *Rodolia limbata* against the breadfruit mealybug.

Majorie Gunasekara has joined the group as an administrative officer doing finance, purchasing, human resources, that sort of stuff. Her skills were needed as the entomology group becomes more independent at the Long Pocket site.

University of Queensland, Department of Entomology

Well, as many of you are now probably aware, the merger will happen. From Jan 1 next year, the Departments of Entomology and Zoology will merge to form the Department of Zoology & Entomology. Co-location will not occur in the foreseeable future, so any visitors need only come to the old address to find us. We are still waiting to be told how this merger will help make us more internationally competitive.

Prof **Gordon Gordh** leaves the Department at the beginning of November to take up the Directorship of the USDA-ARS Subtropical Agricultural Research Station (SARC) at Weslaco, Texas. Gordon has been Professor and Head of Department since 1993. We wish Gordon success in his new position and thank him for his leadership over the last six years. A/Prof **Myron Zalucki** will be acting head until the merger in January. As to a replacement Prof, who knows? Just before we leave Gordon, congratulations are in order for his investiture of the China Friendship Award. This is the highest honour offered by China to foreigners and was awarded for Gordon's assistance in collaborative IPM and quarantine projects. The award was presented at a banquet in the People's Hall, Beijing, which was attended by the Chinese President, Premier and Vice-Premier.

Mergers aside, life in the Department continues. The Physiology and Behaviour group (**Bronwyn Cribb, Dave Merritt** and students) are getting back into biting midge research, once a focus of the Department under Prof **Doug Kettle** and **Eric Reye**. The work is funded at this stage by the Gold Coast City Council and the first results were presented by Honour's student **Jenny Burcher** at the recent Aust. ent. Soc. Conference.

David Yeates' lab are getting back to work after disappearing, almost to a person, to Oxford for the 4th Int Congress of Dipterology. Including Dave, **Christine Lambkin, Margaret Schneider, Jeff Skevington, Shaun Winterton** and **Chris Palmer** all travelled to the meeting. Dave won the prize for having his name on the greatest number of papers without actually presenting one, eight in all. The conference was apparently very worthwhile for all who attended.

The mosquito group keep plugging away. **Joan Bryan, Des Foley** and **Evan Schmidt** are all on their way to the Solomon Islands in November. Their job is to assist in student projects investigating insecticide impregnated bed-nets and to collect malaria vectors. Long nights of sitting waiting for a mozzie to bite you.

In the mite lab **Dave Walter** and **Heather Proctor** have finished their book "Life at a Microscale". Look for it appearing from Uni NSW Press about May next year. Visitors to the lab include **Bruce Smith** (Ithaca College, Ithaca, New York) and **Margery Hoy** (Uni of Florida). PhD student **Owen Seeman** and **Helen Nahrung**, a recent honours graduate of the Department, have recently announced their engagement, congratulations to both.

In **Gimme Walter's** lab, life has been hectic recently trying to get **Greg Quimio's** PhD finished on time. Greg has been working on the biology of fruit fly parasitoids. With Greg's submission and return home to the Philippines, Gimme and post-doc **Stefan Schmidt** took a day or two off to go sawfly collecting and twitching.

Myron Zalucki is recovering from the organisation of the Australasian Applied Entomological Research Conference and is now thrust into the day-to-day grind of organising a smooth departmental merger. Not a job many of us

envy. Your local councillor is also getting over post-conference blues. My PC which was borrowed for the conference came back in a much distressed state and took nearly 10 days and a number of lost files to get back into order.

Queensland Museum

The Australian Entomological Society Conference and the AAERC resulted in several visitors passing through the Entomology Section. **Michael Schauff** (USDA, Washington) spent several days looking at eulophid wasps and **Andy Austin** and **Paul Dangerfield** (Adelaide University) dropped in briefly to scan through the scelionids and braconids. **Bob Matthews** (University of Georgia, currently based in Townsville) gathered some locality records for *Arpactophilus*, a genus of social sphecid wasps, examined some *Mellitobia* (eulophid wasps) and discussed insects as educational tools with **Geoff Monteith**. **Mali Malipatil** (Agriculture Victoria) looked at lygaeid bugs and hymenopteran parasitoids of citrus scale insects and mealy bugs. **Rolf Oberprieler** (CSIRO Entomology) examined weevils, particularly cycad pollinators and **Simon Grove** (James Cook University, Cairns) dropped in to talk saproxylic insects with **Geoff Monteith**.

Between 1860 and 1870 the legendary beetle collector, **George Masters**, visited several Queensland localities and made substantial collections, most of which ended up in the private museum of **Sir William Macleay**. Of those localities the most important was Gayndah, on the Burnett River, where Masters was sent for 3 months in 1870 by his then employer, the Australian Museum, to collect more specimens of the recently discovered lungfish. He did get lungfish but also collected 16 thousand beetle specimens representing more than 1000 species. **William Macleay** and his contemporaries described more than 500 new species from that Gayndah collection, making Gayndah one of the most important historic type localities in Australia. Its importance is increased by the fact that much of the original type material has deteriorated over the years. There is a pressing need to recollect fresh material from the original localities and **Geoff Monteith** has taken up the challenge this summer season. The task is made more difficult because there is little information on exactly where Masters went in the "Gayndah district" and because most of the original vegetation habitats have been destroyed by intensive agriculture. Geoff and Sybil were joined by **Harley and Barbara Rose** for 4 days in October of historical sleuthing in search of remnant vegetation patches and setting of numerous pitfall and intercept traps. Having been raised on a dairy farm near Gayndah in the 50s and 60s, Harley brought a nostalgic insight into the district (and also got livestock of two species of soil burrowing cockroaches). The traps will be maintained throughout summer and all the QM entomology staff will spend a week in the district in February next year. The Queensland Museum has also awarded a six week summer studentship to the project and the appointee will assist in the literature search and fieldwork.

A joint QM and UQ group heads up to the Wet Tropics to continue the mountain insect surveys in that area for 3 weeks in November/December. The party will comprise **Geoff Monteith, Chris Burwell** and **Doug Cook** from QM and **Patrice Bouchard** and **Anthony O'Toole** from UQ. Special target groups will be coelometopine tenebrionid beetles for Patrice's PhD project, dung beetles for Geoff and Doug's mapping project and chalcid wasps, especially the family Eulophidae, for Chris' taxonomic research. Anthony will capture it all on film.

Tony R. CLARKE
Regional Councillor

Bureau of Sugar Experiment Stations

Peter Allsopp, Peter Samson, Les Robertson, Keith Chandler and **David Logan** all attended the AAERC get-together in Brisbane. David also spent time discussing his imminent PhD thesis, while **Peter Allsopp** spent time with **Liza Miller** discussing progress towards her thesis.

Austin McLennan has joined BSES and UQ Entomology to pursue a Masters degree on the management of rhopaea canegrub. He will be based at Condong Mill, near Murwillumbah in glorious northern New South Wales but will have to cross back into Queensland for sampling at Nambour and near Beenleigh. Following completion of his degree at UQ, Austin has been working with **Bill Palmer** at the Alan Fletcher Research Station in Brisbane.

Les Robertson left BSES in early October to take up a position as Program Manager with the Sugar Research and Development Corporation. He will oversee $13.4 million over 4 years for industry research mainly on canegrubs and low sugar

contents. With his swapping dirty field boots for a tie and a spade for a pen we will see a new Robertson instar emerge (or is this the final moult and he'll at last be an adult?).

David Logan, BSES Ayr, attended the 2nd IOBC Melolontha subgroup meeting in Sion, Switzerland on 19-21 October. Following the meeting, he held discussions with Dr **Siegfried Keller** at the Swiss Federal Research Station for Agroecology and Agriculture (FAL) in Zurich, regarding the fungal entomopathogen, *Beauveria brongniartii*, and its use in the control of the scarab *Melolontha melolontha*. Facilities for the commercial production of *B. brongniartii* were inspected, as well as field sites where *B. brongniartii* has been applied.

Peter Allsopp visited **Frances FitzGibbon** and **Paul De Barro,** CSIRO Entomology Canberra, to complete their project on Pest Risk Analysis for exotic pests of sugar cane. The project has identified over 1200 species that are associated with cane throughout the world. Dossiers have been prepared on each, and together with a Pest Incursion Management Plan, the industry should be better prepared if an introduction occurs.

QDPI

Almost everyone attended the Brisbane conferences. They were great - what more needs to be said. There was even a cameo appearance (as a session chair) by entomologist turned manager **Ian Titmarsh**. Ian is now a Program Manager based at Emerald in the Farming Systems Institute, although at the time of the conference he had just completed a stint as acting Director of the Institute, which might have accounted for his somewhat stunned appearance.

Quite a few conference visitors took the opportunity to visit the taxonomy section (**John Donaldson** and **Marlene Elson-Harris**) at Indooroopilly. They included **Russell Messing** from the University of Hawaii who looked at parasitoids of fruit flies from the North Qld Quarantine Zone, **Murray Fletcher** from Orange who looked at Cicadellidae, and **Mali Malipatil** from Victoria examined *Nysius* spp. **Laurence Mound** and **Rolf Oberprieler**, both from Canberra, looked at thrips and weevils respectively. **Judy Grimshaw** from Mareeba visited her old stamping grounds to identify insects collected during her surveys of the Torres Strait and PNG.

In the recent Queensland state budget, $2.4m has been allocated for the next four years to develop new options for heliothis management in Queensland. The "New Initiative Proposal" was developed by **Ian Titmarsh** and **John Rogers,** with input from many others along the way. The research will be conducted at DPI, Indooroopilly, at The University of Queensland, at DPI Yeerongpilly, as well as at Farming Systems Institute and Queensland Horticulture Institute country centres. At Indooroopilly, it means the appointment of an applied insect pathologist/virologist and at least one technician, plus significant capital expenditure. Other positions include an organic chemist/chemical ecologist, and several field-orientated positions shared between DPI's Farming Systems and Queensland Horticulture Institutes. Heliothis should really feel under attack as **Dave Murray** and his team are developing ambitious area-wide management projects on the Darling Downs as well.

The ACIAR peanut white grub team members have all been to various parts of India during August and September. **David Holdom** spent August in Jaipur working with the insect pathologists there on *Metarhizium anisopliae*, while **John Rogers** spent a week visiting Jaipur and then a week between Bangalore and ICRISAT Asia Centre in Hyderabad. The newest member of the team, **Andrew Ward** spent three weeks in Jaipur and Hyderabad-Bangalore on a familiarisation visit. Andrew's home base is Kingaroy.

Frank Page reports that *Helicoverpa punctigera* has been numerous in flowering apple orchards and the lush ground cover during October. At this stage damage to apples has been slight. Obviously the great migration of moths that accompanied the cold front in the first week of October affected the Granite Belt as well as the Downs and the coastal horticultural areas. Numbers of apple dimpling bug and green mirids have been extremely low this year. Perhaps they have abundant hosts elsewhere during this wet winter-spring. Frank also noted that the caper white butterfly has been very numerous during early October and that it appeared to be migrating from south to north. It was observed in large numbers between Stanthorpe, Boonah, Brisbane, Caboolture, and Woodford.

Bob Corcoran and **Pauline Peterson** from the post-harvest disinfestation team have moved to Cairns, lured by a brand new, well-equipped

laboratory built during the papaya fruit fly campaign.

Bronwyn Houlding and **John Duff**, from QHI Gatton, took part in an annual review of the National HRDC project "Advancing the integrated management of diamondback moth in crucifer vegetables" in Adelaide in September. John and Bronwyn reported on their work in Qld on IPM in brassicas. John has been doing a trial comparing IPM practice to a calendar spray program. Bronwyn gave a brief overview of the ACIAR project on IPM in brassicas in Australia and China, which is due to finish in December. This project has complemented the research being undertaken in the HRDC project and close links have developed between the researchers involved.

A resistance strategy that the project has developed was also tried on growers' properties in Qld to test its compatibility in the 'real world' of pest management. The strategy has been developed for use all over Australia, being adaptable for the different growing regions according to their different pest issues. Revised strategies will be produced as new chemicals are released onto the market. Resistance management is most important as diamondback moths from the Gatton area are showing increasing levels of resistance to the Bt sprays used to manage them.

Tonia Loughrey has joined DPI at Gatton as a temporary Information Officer in vegetables. She is currently updating (or writing from scratch) DPINotes on a wide range of vegetable crops. Tonia also is busy completing her Master's thesis on tomato pest management.

Iain KAY
Regional Councillor

SOUTH AUSTRALIA

Entomology Unit, SARDI

Peter Bailey attended the Fifth International Symposium of Fruit Flies of Economic Importance at Penang, and wishes to thank **Bob Corcoran** and his fellow Queenslanders for sharing their duty free mineral water during a particularly dry closing dinner.

Part of the South Australian contingent to attend the combined Australian Entomology Society - Applied Entomological Conference in Brisbane included **Greg Baker, Peter Bailey, Dennis Hopkins, Jianhua Mo** and **Peter Taverner**.

The University of Adelaide
Department Of Horticulture, Viticulture And Oenology

Peter Kolesik, together with **Ray Gagne**, USDA Washington DC, has commenced work on the revision of Australian gall midges. This will include redescriptions of Skuse types made available by **Peter Cranston**, ANIC.

The University of Adelaide
Department of Crop Protection

The department is host to a new undergraduate degree course - a Bachelor Of Agricultural Science Major in Integrated Pest Management. Information about the course with links to General Information, Career Opportunities, Course Structure, Facilities and Resources, Descriptions of Specialist Subjects, Accommodation, Application Procedure, Fees, and Contact Information can be found at:

http://www.waite.adelaide.edu.au/Teaching/IPM_major/ipm.htm

Congratulations to **Muhammad Iqbal** and **Bijan Hatami** who have each been awarded PhD's. Iqbal's thesis was entitled "Systematics and phylogeny of the Baeini, (Hymenoptera: Scelionidae), with special reference to the Australasian fauna". Bijan's was on "Seasonal occurrence and abundance of diamondback moth, *Plutella xylostella* (L.), and its major parasitoids on brassicaceous crops in South Australia".

New Honours research students include **Camilla Dorian** studying the influence of ecdysone and juvenile hormone on glycosylation in *D. melanogaster*, **My-My Huynh** working on insect biodiversity in ecosystems affected by weeds, **Nicholas Stevens** working on the taxonomy and phylogeny of the microflea wasp *Baeus* sp. and **Megan Leyson** who is studying courtship and mating in the horehound plume moth.

A review of the National HRDC diamondback moth project in Adelaide in September brought entomologists from across Australia (**Peter Ridland, Nancy Endersby, Francoise Berlandier, Lionel Hill, Richard Vickers, John Duff, Bronwyn Houlding** and **Mark Stanaway**) and overseas (Prof **Tony Shelton** from Cornell University, USA and Dr **Peter Cameron** from Crop & Food Research, New Zealand) to meet with district horticulturalists, brassica growers and local entomologists (**Mike Keller, Greg Baker, Jianhua Mo, Rick Roush** and **Mahmood Ahmad**). Miraculously the project and the participants

survived (and benefited from) the 3 days of discussions.

Other visitors to the Department included **Elizabeth Grafton-Cardwell** from the University of California, Riverside, who gave a talk on Red scale and IPM in citrus, and **Bill Bowers** from the University of Arizona who spoke on ecdysone in spinach and its role in insect resistance. **Keith Hopper** USDA, University of Delaware, delivered a seminar on 28 September entitled "Assessing and improving the safety of introductions for biological control: Much ado about little?"

In September, the first field sampling of the Lacy-winged Seed Fly, *Mesoclanis magnipalpis* for biocontrol of boneseed (released in July by **Rick Roush, Craig Clarke** and **Ailene Bruzzese** (Keith Turnbull Research Institute) at Morialta Conservation Park near Adelaide), was undertaken by **Gary Taylor**. The sample failed to find any flies, but amidst a hillside of yellow boneseed flowers, the probability of detection, at least initially, remained rather low. Even so, another species of seed fly, *Mesoclanis polana*, released for control of the closely related weed bitou bush in 1996 has increased more than a billion fold and dispersed more than 400 km per month throughout coastal NSW. Up to 100% of buds are infested with eggs at some sites and about 40% of the seed is being destroyed. Continued build-up of fly populations is expected to increase control of the weed. **Royce Holtkamp** (NSW Agriculture), **Robin Adair** (Keith Turnbull Research Institute) and **Penny Edwards** (CSIRO Entomology) are continuing to monitor *Mesoclanis polana*. Both *Mesoclanis* species were collected in South Africa and reared in the Quarantine Laboratories of the Keith Turnbull Research Institute at Frankston near Melbourne in Victoria.

Crop Protection representatives to the combined Australian Entomology Society - Applied Entomological Conference in Brisbane were **Mahmood Ahmad, Andy Austin, Craig Clarke, Paul Dangerfield, Kaye Ferguson, Darryl Jackman, Mike Keller, Gwen Mayo, Rick Roush, Otto Schmidt** and **Gary Taylor.**

Gary TAYLOR and Paul DANGERFIELD
Regional Councillors

VICTORIA

Agriculture Victoria, Institute for Horticultural Development, Knoxfield

David Williams visited the UK for a week in July to look at fruit production, turnout of Australian Pink Lady apples and the impact of the "Assured Produce" scheme on producers. The following week he visited Belgium to attend the International Conference on Integrated Fruit Production. He managed to spend a couple of days back home before heading off to the Australian Fresh Stone Fruit Growers Conference in Ballina and the Australian Apple and Pear Growers Association Annual Conference and the Australian Cherry Growers Conference in Adelaide. A couple of weeks later he was off to South Africa with the Novartis Forum.

Peter Ridland and **Nancy Endersby** visited the Waite in September for the first project meeting of the HRDC funded National DBM project. They also visited Brisbane to attend the 6th AAERC and to participate in the post-conference workshop on management of diamondback moth.

Catherine Mansfield has left IHD to take up the position of IPM Development Officer at the Institute of Sustainable Agriculture, Tatura Centre.

Alison Medhurst reports that the Integrated Pest Management in Greenhouse Crops project is in the middle of setting up a commercial IPM service, producing identification card sets (similar to the pome and stone fruit guide produced by **Mali Malipatil** and Alison), technical manuals and developing a national training course. None of this is ready yet but will be soon!

DeAnn GLENN
Fiona CLISSOLD
Regional Councillors

ELECTRONIC NEWS

ASCU on the Web!

The Agricultural Scientific Collections Unit (ASCU) of NSW Agriculture in Orange has finally made it to cyberspace. Our website can be accessed at:

http://www.agric.nsw.gov.au/Hort/ascu

In addition to details of the staff and the Trust Act, the site offers keys to the economically

important leafhoppers (Cicadellidae) of Australia (by **Murray Fletcher**) and the fruit flies (Tephritidae) of NSW (by **Peter Gillespie**). Information on specific insect pests is being developed, with a page on Argentine ants already available. Typelists for the Entomological Collections can be browsed and will eventually include photographs of all the primary types held in the Collections. At present, only the Primary Types of Cicadellidae and Flatidae have been photographed. The site also features an Art Gallery of the entomological paintings of **Emil Zeck** who painted in the 1920s and of the paintings of plant diseases and insects prepared by **Margaret Senior** in the 1960s. Check the site out regularly because several additional features are being developed, including a pictorial key to the Planthoppers of Australia (Fulgoroidea), keys to thrips and whiteflies and updated electronic versions of many of the Department's advisory publications on insect and mite pests.

Cornell University Insect Collection Website Reopening

The Cornell University Insect Collection is arguably the largest University-based insect collection, and certainly the taxonomically most diverse collection, in North America, housing somewhere over 5 million pinned specimens representing extensive diversity in nearly all insect Orders. The Collection's foundations rest on the contributions of Cornell entomologists such as John Henry Comstock, James G. Needham, J. Chester Bradley, W.T.M. Forbes, Henry Dietrich, Howard E. Evans, Laverne L. Pechuman, George C. Eickwort and John G. Franclemont. The diverse interests of these professors ensures a broad taxonomic base for the Collection.

In an effort to expand the utility of the Collection to the World's entomological community, the CUIC personnel are happy to announce the reopening of their website. The primary purpose of the site is to make information available on-line for type holdings and for holdings in selected taxa for which electronic data summaries have been compiled. We hope such information will stimulate researchers to utilise our material, and as such, we look forward to loaning specimens useful for systematic research.

The CUIC has historically accessioned both paratypes and holotypes and so information is available for both classes of type. Paratype loans are treated as per any non-type material, with a 2-year loan period. Holotypes are loaned for renewable periods of two months. For several taxa - Scarabaeidae, Lepidoptera, Mantidae - a generic-level database provides a searchable summary of our holdings. The site also includes textual summaries of the important aspects of collections for other insect Orders and taxa, and a brief history of the CUIC.

Find us at:

http://henry.ento.cornell.edu

Journal of Neuropterology

Editorial, Index & Summaries of the first issue of the new Journal of Neuropterology, as well as other Neuropterological Information, Notice to Authors and subscription information for The Journal of Neuropterology can be found in the WWW page:

http://www.ucm.es/info/zoo/JofN.htm

COMING EVENTS

IOBC/SEARS Workshop
Sydney, January 1999

Workshop of SEARS/IOBC Working Group
on Greenhouse/Protected Crops IPM
"Natural Enemy to Biological Control Agent:
Evaluating the Process"

PLEASE NOTE: Due to lack of interest, this workshop has been cancelled

Further information:

E-mail: stephen.goodwin@agric.nsw.gov.au

National Workshop on
The Use of Environmental Management Systems in Agriculture
Ballina, NSW
May 1999

ADVANCE NOTICE

Funded by RIRDC and LWRRDC, but further sponsorship is being sought, as is endorsement by the various stakeholder groups who will attend.

Aims of the workshop include the harmonisation and recognition of different EMS's used in agriculture, identification of stakeholders' needs to advance and promote the use of EMS in agriculture and development of a national strategy to guide development of EMS in agriculture.

The workshop is an invitation-only event (numbers limited to 120, unless we get a much higher demand, in which case there will have to be a charge to attend).

The proposed format includes presentation of invited papers to address the major issues surrounding the use of EMS in agriculture, workshops to further discuss issues identified, development of strategies to assist in the solving of problems etc, working towards development of a national strategy.

Who should attend? - farmers, agri-business representatives, EPA staff, Department of Land/Water/Soils, Conservation, local, state and federal planning and policy reps, conservation groups, certification bodies, organic farming reps, education staff etc.

Proceedings from the workshop will be produced. In addition, recommendations to key bodies will also be produced. It is proposed to develop a guide to the various EMS approaches used and co-ordinate these with current BMP approaches.

A newsletter will be produced 4 times over the life of the 12 month project, detailing sponsors, aims of the workshop, raising issues for discussion, directions etc. and to build interest in the workshop.

Could any people interested in attending please contact **Genevieve Carruthers**:

Phone: 0266 261 237
Fax: 0266 283 264
Email:
genevieve.carruthers@agric.nsw.gov.au

I'm also looking for members of a steering committee who will identify major issues, and develop the workshop program.

SPRAY OILS BEYOND 2000

Sustainable Pest and Disease Management
Sydney, Australia
25-29 October 1999
University of Western Sydney, Hawkesbury
and
University of Florida

Some regard spray oils as minor components of pest management programs. Recent developments suggest that this is not so. The potential for use of spray oils in sustainable integrated programs is increasing rapidly. This potential is related to improvements in manufacturing technology and formulation and a broader understanding of their use. It is also related to problems associated with the use of synthetic pesticides, particularly concern about the environment, human health and sustainable agriculture, horticulture and forestry.

An essential component of sustainable pest and disease management is effective marketing of biorational pesticides. Spray oils are very effective biorational pesticides.

The comprehensive program for "Spray Oils Beyond 2000: Sustainable Pest and Disease Management" will focus on all major issues and the Proceedings will be published in late 2000 as a book with conference sessions forming chapters. Although most emphasis will focus on petroleum spray oils, the Conference will also deal with plant and fish oils.

Conference organising committee is J.L. Knapp (University of Florida), G.A.C. Beattie, D.J. Rae and R. Spooner-Hart (UWS) and M. Hodgkinson (Ampol Research and Development) with assistance from Alison Frost, Hawkesbury Technologies Ltd, UWS.

First Notice and Call for Papers is now available from:

Alison Frost
Conference Secretary
Hawkesbury Technologies Ltd
UWS Hawkesbury
PO Box 415
Richmond, NSW 2753
Ph: (02) 4570 1690
Fax: (02) 4570 1520
Email: a.frost@uws.edu.au

INSECT PATHOLOGY COURSE
30 March - 23 April 1999
CABI Bioscience

CABI Bioscience has an active program directed towards developing microbial and nematode agents as products for the control of insect and other pests. The multidisciplinary biopesticide research team has expertise in all stages of biopesticide development from exploration to registration, including the selection of agents, production formulation, application technologies and ecology. Through its Biosystematics and Biodiversity teams, CABI Bioscience also has world class expertise in the identification of pathogens.

This course will draw on expertise from both programs to cover a broad range of aspects of insect pathology and its application to biopesticide development. Depending on demand, units will be included on all potential pathogens, including fungi, nematodes, bacteria, viruses and protozoa. The course will include demonstrations, workshops and seminars, study visits, and opportunities to learn and practise practical techniques. It will be led by international experts from CABI Biosciences, with additional contributions by specialists from the Institute of Virology and Environmental Microbiology, Natural Resources Institute and Imperial College.

Course fee is £4,000.

Contact and further information:
Mrs Stephanie Groundwater
CABI Bioscience UK Centre (Egham)
Bakeham Lane
Egham
Surrey, TW20 9TY
UK
Tel: 44--1784-470111
Fax: 44-1491-829100
Email: S.Groundwater@CABI.org

SOCIETY OF AUSTRALIAN SYSTEMATIC BIOLOGISTS
AUSTRALIAN SYSTEMATIC BOTANY SOCIETY
Invertebrate Biodiversity & Conservation
Perth 1999 Joint Conference

Details: ***Myrmecia*** **34(3): 22-23**

THE NEW PANORAMA OF ANIMAL EVOLUTION "
The New (XVIII) International Congress of Zoology
Athens, Greece
28 August-2 September. 2000

Details: ***Myrmecia*** **34(3): 24**

Contact:
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University of Athens
Department of Biology
Section of Zoology and Marine Biology
15784 Athens, Greece.
Tel. 30-1-7264364
Fax. 30-1-7284604
Email. rpolyme@biology.db.uoa.gr
URL http://www.york.biosis,org/zrdocs/new_icz.

7th AUSTRALASIAN CONFERENCE ON GRASSLAND INVERTEBRATE ECOLOGY
Perth, Western Australia
September 1999

Details: *Myrmecia* **34**(2): 19

Further information:
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CSIRO Entomology
Private Bag PO
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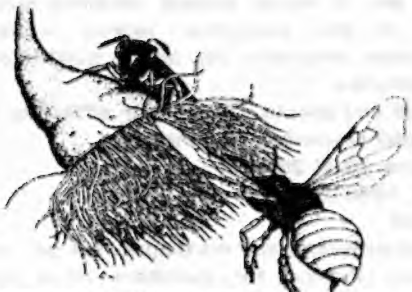
Western Australia 6014
Phone: 08 9333 6641
Fax: 08 9333 6646
E-mail: johnm@ccmar.csiro.au
Information also available at:
http://www.agric.wa.gov.au:7000/Ento/ACGIE/



XIII INTERNATIONAL CONGRESS OF IUSSI INTERNATIONAL UNION FOR THE STUDY OF

SOCIAL INSECTS
29 December 1998 - 4 January 1999
University of Adelaide

Further information:

Dr Michael P. Schwarz
Biological Sciences
The Flinders University of South Australia
Phone: 61 8 8201 3729
Fax: 61 8 8201 3015
Email: Michael.Schwarz@flinders.edu.au
Web site:
http://www.bio.flinders.edu.au:80/iussi/home.htm

XIVth INTERNATIONAL PLANT PROTECTION CONGRESS

Plant Protection Towards the Third Millennium
Where Chemistry Meets Ecology
Jerusalem, ISRAEL
July 25-30 1999

Details: *Myrmecia* **33**(2): 24-25

Contact:

Congress Secretariat
XIVth International Plant Protection Congress
PO Box 50006
Tel Aviv 61500
ISRAEL
Telephone: +972 3 514 0000
Fax: +972 3 514 0077 or 517 5674
Email: IPPC@Kenes.com

Fourth Conference of the International Society of Hymenopterists.

Canberra, AUSTRALIA
6-11 January 1999

Details: *Myrmecia* **32**(1): 28

The Conference address and contact is:

4th Conference of the International Society of Hymenopterists,
c/o CSIRO, Division of Entomology,
P.O. Box 1700
Canberra, ACT 2601
AUSTRALIA
fax: 61-6-246.4264
Email: ishcon99@ento.csiro.au

URL:
http://iris.biosci.ohio-state.edu/ish/conf1999.html

XXI International Congress of Entomology
Iguassu Falls, Brazil
20-26 August 2000
Entomologists Preserving Biodiversity

Details: *Myrmecia* **34**(1): 30-31.

Everything you could possibly want to know about the next ICE is available on the Congress Web Page **http://www.embrapa.br/ice**, including details of accommodation, delegates, services, associated activities, administrative matters, sponsors, symposia, etc.

NEW PUBLICATIONS

"Nature Sounds of Australia"
CD and Booklet coordinated by D.C.F. Rentz, and published by the Sound Heritage Association Ltd., 1996.

This represents one of a set of 'authoritative surveys of natural, spoken and musical sound heritage of Australia'. It comprises a compact disc and accompanying booklet, containing recordings of approximately 120 species of mammals, birds, frogs, crickets, katydids, cicadas, ghost crabs, plus ultrasonic calls (slowed to audible range) of katydids, a pyralid moth and jumping spider from Kings Park in Perth, W.A. The recordings include both those made under controlled acoustic environments (with minimal background noise), plus field recordings with some inevitable (but natural) low background noise. The recordings are clean and generally of good quality, providing a valuable repository of a wide selection of native animal calls.

The well produced booklet provides a listing of recordings (essential for identifying calls when listening to the disc), together with a series of documented colour photographs of many of the mammals, birds, insects, and crabs represented in the recordings. These are followed by an introduction to the recordings, and a series of more specialist chapters dealing with: Mechanisms of sound production in animals (D. Rentz, P. & D. Maitland, and W. Bailey); Bird sounds (D. Rentz); Acoustic communication in frogs (M. Littlejohn); The Australian cicada fauna (M. Moulds); Sound production in cicadas (D. Young); and finally 'An ultrasonic walk in Kings Park, Perth, W.A.' (D.T.Gwynne). These provide authoritative introductions to these topics.

The combined CD and booklet provides an interesting and wide ranging overview of the acoustic characteristics of segments of the Australian fauna, an aspect of our fauna which has become much more widely appreciated and researched in recent years. The publication of this set of recordings should, therefore, be of interest to Australian natural historians in general, and many entomologists in particular.

The set is available, at $25, from: The School of Music, Melbourne University; National Film and Sound Archive Shop, and ANIC shop.

Tony EWART
Queensland Museum

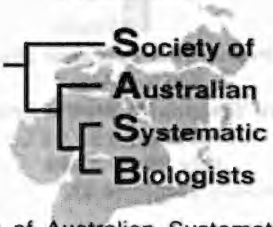
NOTICES

CSIRO JOURNALS
CONCESSIONAL PRICES 1999

As in previous years, AES members are entitled to purchase the CSIRO journals are concessional prices, as listed in *Myrmecia* **34**(3): 28. Proforma invoices will be sent directly from CSIRO Publishing to members. Please contact:

Tracey Lockwood
Subscriptions Officer
CSIRO Publishing
PO Box 1139
Collingwood Vic 3066
Ph: 1800 626 420
Fax: 03 9662 7555
Email: info@publish.csiro.au

SOCIETY OF AUSTRALIAN SYSTEMATIC BIOLOGISTS



The Society of Australian Systematic Biologists has elected the following Council for the 1999 term-of-office:

President elect:
Mike Crisp, Australian National University
Vice-President:
Winston Ponder, Australian Museum
Secretary:
David Morrison, University of Technology Sydney
Treasurer:
Steve Donnellan, South Australian Museum
Councillor:
David Yeates, University of Queensland
Councillor:
Robin Wilson, Museum of Victoria

These people will take up office at the 1998 Annual General Meeting in Canberra.

David MORRISON
Secretary & Returning Officer
SASB

Job Advertisement

Field Crops Entomologist

A challenging opportunity exists for a Field Crops Entomologist, to join the well established Integrated Pest Management Group of VIDA. The group consists of Plant Pathologists, Entomologists, Nematologists and Plant Breeders and its role is to maximise the long term productivity and sustainability of dryland agriculture in Victoria through the development and promotion of integrated pest (insects, diseases and weeds) management strategies.

The Victorian grains industry is over $700m per year to the Victorian economy. Key to the sustainability of this industry is reduced dependence on pesticides and a reduction in the impact of insects, diseases and weeds on production. The successful applicant will be responsible for researching management strategies for economically important insect pests of dryland field crops, packaging available pest management information into an accessible and integrated form and transferring current knowledge on pest management to the grains industry.

The successful applicant must be able to demonstrate:

post graduate qualifications and experience in pest management;

ability to initiate, conduct and analyse research into the development of sustainable insect pest management strategies, preferably in dryland agriculture;

sound knowledge of the key insect pests of cereal, oilseed and pulse crops in Victoria;

ability to prepare reports and disseminate research results to the scientific and farming communities, both written and orally using current extension methods;

ability to supervise, train and develop staff.

The successful applicant must hold an appropriate Degree or Diploma in Agricultural Science, Science or an equivalent qualification.

Please contact **Craig Turvey** on 03 5362 2111 for a position description and Dr **John Brown** on 03 5362 2111 for further information. The salary range for the position is $35,306 to $50,003. This is a fixed term position available up to 30/06/2003, subject to funding.

Please send applications, quoting position number NRE 147803, to: Personnel Officer, Victorian Institute for Dryland Agriculture, Private Bag 260, Horsham 3401, or by facsimile on 03 5362 2187, by close of business 11 December, 1998.

The successful applicant will be required to enter into a Department of Natural Resources and Environment Australian Workplace Agreement. This position is located at the Victorian Institute for Dryland Agriculture, Horsham. A current Victorian drivers licence is required. Recipients of VPS departure packages should note that re-employment restrictions apply. The Department is an equal opportunity employer and offers a smoke-free workplace.

Find information about NRE on the Internet at http://www.nre.vic.gov.au/

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.

FORM OF NOMINATION FOR MEMBERSHIP

To be returned to:
Dr D.E. Walter, AES Secretary, c/o Dept. of Entomology
University of Queensland, QLD 4072

We the undersigned

Proposer: ....
(print name here) (signature)

Seconder: ....
(print name here) (signature)

being financial members of the Society, propose the following for membership of The Australian Entomological Society Inc.:

Title .. Initials .. Given Name ..... Family Name .....

of (Address): .....

.....

Tel: ..... Fax: .....

Email: ..... Degrees, etc: .....

Occupation or Appointment: .....

Interests, experience and publications in entomology for publication in the News Bulletin *Myrmecia* (please attach brief resumé):

I accept nomination and undertake if elected to abide by the rules of the Society and to pay annual subscriptions by the date prescribed.

Signature: ..... **Date:** .....

For **1998**, new student/retired members - $25.00; new full members - $55.00. **Payment with nomination required.** (NB. These rates only apply for new memberships.

.....

(EXECUTIVE USE ONLY)

Nom. received: ..... Nom. considered at meeting: .....

Payment received: ..... Elected at meeting: .....

Membership type: ..... Applicant advised: .....

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